Claims: I claim:

1. A bellows for use in a resuscitator, comprising:

(a) a plurity of substantially rigid adjacent structural members coupled into a colligate bellows structure with a long and a short axis;

(i) wherein the short-axis of the bellows structure constitutes a cross-section of the bellows structure;

(ii) wherein the bellows structure has an exterior and an interior surface;

(iii) wherein the interior surface forms a fluid chamber for accommodating a fluid;

(iv) wherein a positioning of the bellows structure to provide maximum potential volume of the fluid chamber constitutes an inflated condition of the bellows;

(v) wherein the positioning of the bellows structure to provide minimum potential volume of the fluid chamber constitutes a deflated condition of the bellows; and,

(vi) whereby a force applied to the exterior surface of the bellows structure in a direction parallel to the short axis of the bellows structure results in a decrease in volume of the fluid chamber, resulting in a dimensional decrease of the cross-section of the bellows structure, effectively

transitioning the bellows from the inflated condition to the deflated condition, whereby the bellows can mechanically assistance movement of fluid into and out of the bellows mechanism.

2. The bellows of claim 1, wherein the coupling of the structural members provides unidirectional articulation with adjacent structural members, whereby the unidirectional articulation restricts pliability of the bellows into shapes other than those inclusive or between the inflated condition and the deflated condition of the bellows structure.

3. The bellows of claim 1, wherein the bellows structure forms a substantially cylindrical shape when positioned in the inflated condition.

4. The bellows of claim 1, wherein the bellows structure forms a substantially oblong shape when positioned in the deflated condition.

5. The bellows of claim 1, further comprising a volume-restrictor for use in a resuscitator, the volume restrictor including:

(a) one or more obturator members which obstruct transition of the bellows between the inflated condition to the deflated condition; and,

(b) an adjustable placer to provide for selective movement of obturator members into multiple positions relative to the bellows structure,

whereby movement of the obturator members provides for variable ranges of movement of the bellows structure between the inflated condition and the deflated condition, whereby operation of the adjustable placer specifies a predetermined degree of movement of the bellows.

6. A pressure-restrictor for use in a resuscitator, comprising:

(a) a rigid housing structure positioned distal to a flow-generator of a resuscitator and proximal to a flow port to a patient, whereby positioning the rigid housing structure separates the flow-generator and a flow-output portion of a resuscitator;

(i) wherein the rigid housing structure contains a number of fluid conduits to permit the flow of fluid;

(b) a movable stopper member positioned adjacent to the housing structure, wherein the position of the movable stopper member can be modified to completely, partially, or minimally obstruct the fluid conduits of the rigid housing structure; and,

(c) an automatic controller which operates in response to pressure in the flow-output portion of a resuscitator;

(i) wherein variability of pressure in the flow-output portion of a resuscitator causes movement of the

movable stopper member in relation to the housing structure;

(ii) whereby movement of the movable stopper member completely, partially, or minimally obstructs the fluid conduits of the housing structure; and,

(iii) whereby operation of the automatic controller may provide a decrease in pressure between the flow-generation and flow-output portions of a resuscitator.

7. The pressure restrictor of claim 6, further comprising a regulator, the regulator including:

(a) a resistance apparatus which opposes the movement of the adjustable stopper member of the automatic controller into a position which obstructs fluid flow through the rigid housing structure of the pressure restrictor; and,

(b) a device to vary the degree of opposition provided by the resistance apparatus, whereby operation of the device constitutes a means for adjusting the automatic controller, thereby enabling an operator to specify a predetermined pressure at which the automatic controller will engage movement of the adjustable stopper member into a position which obstructs fluid flow through the rigid housing structure of the pressure restrictor.

8. A method for providing volume-controlled manual positive-pressure artificial ventilation, comprising:

(a) providing a manually-operated resuscitator;

(b) providing a volume restrictor;

(c) selecting a predetermined configuration of the volume restrictor; and,

(d) manually operating the resuscitator, relying on the volume restrictor to determine maximum volume delivered in each breath, whereby relying on the volume restrictor while operating the resuscitator will result in delivery of substantially-equivalent volumes in each breath.

9. A method for providing pressure-controlled manual positive-pressure artificial ventilation, comprising:

(a) providing a manually-operated resuscitator;

(b) providing a pressure restrictor, having an adjustable controller;

(c) selecting a predetermined setting for the controller of the pressure restrictor; and,

(d) manually operating the resuscitator, relying on the pressure restrictor to determine maximum volume delivered in each breath, whereby relying on the pressure restrictor while operating the resuscitator will result in inflation of the lungs to a substantially-equivalent pressure in each breath.

10. A method of monitoring pulmonary compliance and/or airway resistance during volume-controlled manual positive-pressure artificial ventilation, comprising:

(a) providing a manually-operated resuscitator;

(b) providing a volume restrictor;

(c) providing a pressure restrictor having an adjustable controller;

(d) selecting a predetermined configuration of the volume restrictor;

(e) selecting a predetermined setting for the controller of the pressure restrictor;

(f) manually operating the resuscitator, relying on the volume restrictor to determine maximum volume delivered in each breath;

(g) adjusting the controller of the pressure restrictor to a minimum point at which the pressure restrictor fails to interfere with delivery of the maximum volume specified by the volume restrictor; and,

(h) making repetitive serial assessments of the ability to operate the resuscitator with delivery of the maximum volume specified by the volume restrictor without interference from the pressure restrictor, whereby development of an inability to operate the resuscitator with delivery of the maximum volume specified by the volume restrictor caused by interference from the pressure restrictor is

indicative of increasing airway resistance and/or decreasing pulmonary compliance.

11. A method for monitoring pulmonary compliance and/or airway resistance during pressure-controlled manual positive-pressure artificial ventilation, comprising:

(a) providing a manually-operated resuscitator;

(b) providing a pressure restrictor having an adjustable controller,

(c) providing a volume restrictor;

(d) selecting a predetermined setting for the controller of the pressure restrictor;

(e) manually operating the resuscitator, relying on the pressure restrictor to determine maximum volume delivered in each breath;

(f) temporarily adjusting the volume restrictor to the earliest point at which the volume restrictor interferes with attainment of the desired maximum inflation pressure specified by the pressure restrictor;

(g) observing the setting of the volume restrictor at which this interference occurs;

(h) restoring the volume restrictor to a setting which eliminates the observed interference; and,

(i) making repetitive serial assessments of the setting of the restrictor at which interference with the pressure restrictor occurs, particularly observing

for decreased volume settings which provide for such interference, whereby a change in the setting of the volume restrictor required to induce interference with the pressure restrictor is indicative of a change in airway resistance and/or pulmonary compliance.